

Math 6 - Unit 6: Statistics

Unit 6 Study Guide

Name: KEY 3/9/18

Class Period: 1 2 3 4 Date: _____

Use the following data to answer problems 1-4.

At the last five basketball games, Simone scored the following points: **12, 15, 9, 11, 8.** 8, 9, 11, 12, 15

1) What is the **mean** number of points Simone scored?

11

2) What is the **median** number of points Simone scored?

11

3) What is the **mode** of Simone's scores?

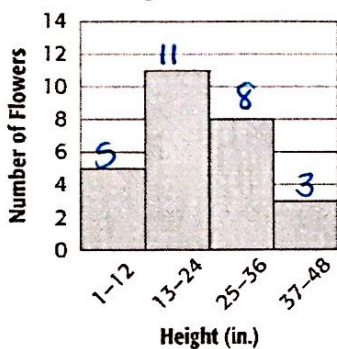
NONE

4) What is the **range** of Simone's scores?

7

Use the histogram below to answer questions 5-8.

Heights of Flowers



5) How many flowers were less than 25 inches in height?

$5 + 11 = 16$

6) How many flowers ~~are~~ in the 25-36 in. interval? 8

7) How many flowers were at least 13 inches tall?

$11 + 8 + 3 = 22$

8) Which interval had the fewest number of flowers?

37-48

For questions 9-13 indicate whether the question IS statistical (S) or NOT statistical (NOT).

9) How many times has each of my classmates been to the beach? S

10) How many kids does Mrs. Katz teach? NOT

11) How many pairs of pants does each of my family members own? S

12) How many ice cream shops are in each town in Georgia? S

13) How many songs are on Katherine's iPod? NOT

Use the dot plot to answer problems 7 - 9:

7) What is the **mode** of the data? 5

8) What is the **range** of the number of runs scored?

$7 - 1 = 6$

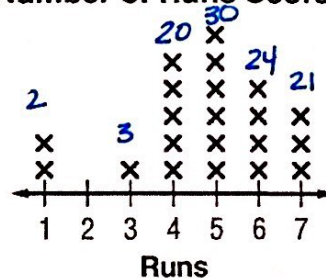
9) What is the **mean** number of runs scored?

$100 \div 21 = 4.76$

10) Which measure of center is **MOST** affected by an outlier?

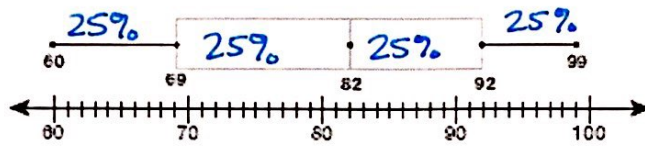
MEAN

Number of Runs Scored



Use the box plot to answer questions 11 – 14.

Number of Shoes sold per Day



11) What percent of data is **GREATER THAN 69** (the lower quartile)? 75%

12) What is the **median** of the data in the box plot? 82

13) What is the **IQR** of the data in the box plot? $92 - 69 = 23$

14) Which **set of data** could be used to create the box plot?

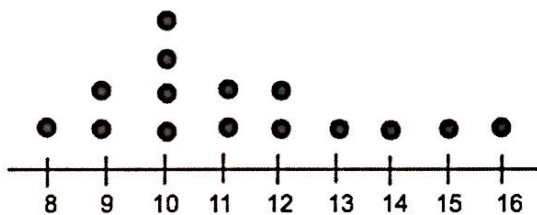
~~a.~~ 60, 61, 61, 69, 79, 80, 99

b. 60, 61, 61, 82, 83, 90, 99

~~c.~~ 60, 61, 61, 82, 79, 80, 100

~~d.~~ 0, 61, 61, 82, 79, 80, 99

15) How many **total people** were surveyed in the dot plot below?

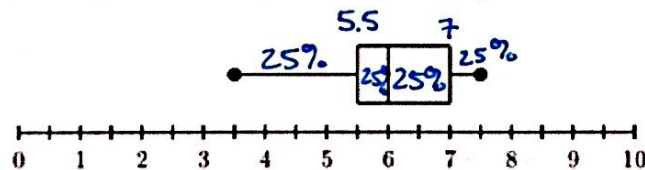


Number of Shoes Students Have

15 people

Use the box plot to answer questions 15 – 16.

Number of Baskets Made for Each Player on the Team



16) What is the **interquartile range** (IQR) in the box plot?

$7 - 5.5 =$ 1.5

17) What percent of participants **scored more than 6 baskets**?

50%

18) The 5-Number Summary of a box plot is shown below.

What is the **interquartile range** (IQR) for this set of data?

Minimum: 7 Lower Quartile (Q₁): 9 Median: 18 Upper Quartile (Q₃): 26 Maximum: 58

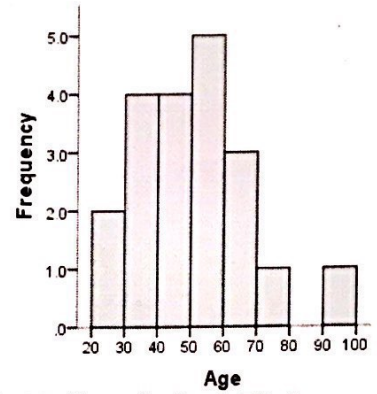
$26 - 9 =$ 17

Use the histogram to the right to answer questions 18-19.

19) The histogram to the right shows the ages of the adults who went to see **Black Panther**.

Which statement about the histogram is **TRUE**?

- a. Most ages fall within the 60-70 interval.
- b. Most tree heights fall within the 20-30 interval.
- c. No students scored within the 80-90 interval.
- d. No students had scores within the 50-60 interval.



20) How many more people who went to see **Black Panther** are in their 40s than in their 70s?

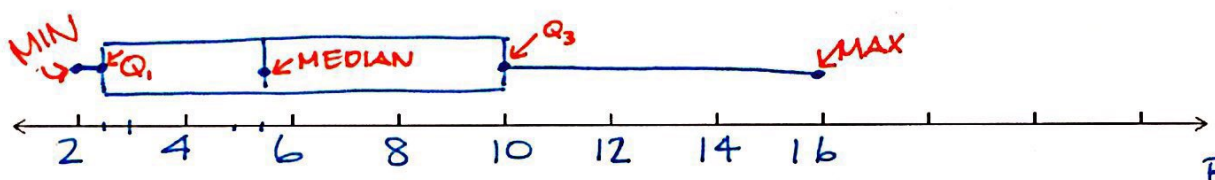
Constructed Response

21) The data below represents the number of students missing a pencil in all the classes on 6B.

10, 5, 6, 5, 11, 10, 2, 2, 3, 8, 16, 2, 10, 3, 8, 2

MEDIAN: 5.5
 Q₁: 2.5
 Q₃: 10
 MIN: 2
 MAX: 16

A. Make a **box plot** of the data.



- B. Find one measure of spread. Clearly identify which measure of spread you are finding. IQR = 7.5
- C. Find one measure of center. Clearly identify which measure of center you are finding. MEDIAN = 5.5
MODE = 2
MEAN = 6.44
- D. Circle one of the choices below to describe the shape of the box plot.

- a. skewed left
- b. skewed right**
- c. symmetrical

→ 2, 2, 2, 2, 3, 3, 5, 5, 6, 8, 8, 10, 10, 10, 11, 16

$\frac{2+3}{2} = \frac{5}{2} = 2.5$ $\frac{5+6}{2} = \frac{11}{2} = 5.5$ $\frac{10+10}{2} = \frac{20}{2} = 10$

SUM = $\frac{103}{16}$